Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class Period \_\_\_\_\_\_

Test: Functions

**Summer Jobs** For a summer job you decide to mow lawns. You will charge $10 per hour for mowing plus $3.00 for cleaning the grass clippings off the sidewalks and driveway. You want to calculate how much money you will earn.

1. How much money will you earn if you mow 1 hours? \_\_\_\_\_\_ How much will you earn if

you mow 2 hours? \_\_\_\_\_\_ How much if you mow 3 hours? \_\_\_\_\_\_

2. To calculate your pay, what is the input variable? What is the output variable?

Input Variable

Output Variable

3. Choose letters to represent the variables and write an equation for the “mowing lawns”

function

Check your equation here

for mowing 2 hours.

Equation

4. Complete the table. 5. Complete the Graph.

|  |  |
| --- | --- |
| Input  \_\_\_\_\_\_\_\_\_\_ | Output  \_\_\_\_\_\_\_\_\_ |
|  |  |
| 1 |  |
| 1 |  |
| 2 |  |
| 2 |  |

What is the growth rate for the “mowing lawns” function?

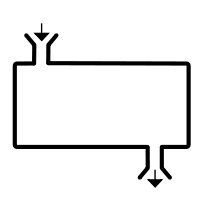
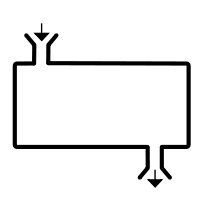
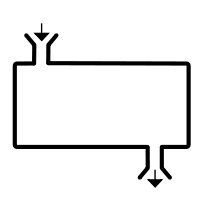
Use a pink highlighter or pencil to show the growth rate

on the equation, table, and graph.

What does the x-axis represent? What does the y-axis represent? Label both axes.

Choose and clearly show a scale on each axis.

**Inputs/Outputs** Given an input, determine the corresponding output.

6. 7. 8.

**Is it a Function?** Write the set of ordered pairs for the relations represented by the mapping, table, and graph. Determine if the relation is a function. JUSTIFY your answer.

9. 10. 11.

|  |  |
| --- | --- |
| Input | Output |
|  | 4 |
|  | 1 |
| 0 | 0 |
| 1 | 1 |
| 2 | 4 |

1

2

3

4

3

5

7

Ordered Pairs: Ordered Pairs: Ordered Pairs:

YES NO? Why? YES NO? Why? YES NO? Why?

**Classify Graphs** Classify each graph as a function or not a function; as linear or non-linear; as discrete or continuous; and as increasing, decreasing, neither, or both.





12. 13. 14.

**Qualitative Graphs** Dylan took a one-day driving trip from his home. The graph shows his distance from home as a function of time.

15. How fast was Dylan driving for the first 2 hours?

miles from home

16. For what time interval did Dylan stop and rest?

17. In the context of Dylan’s trip, explain the meaning of

the interval when the graph is decreasing.

hours